

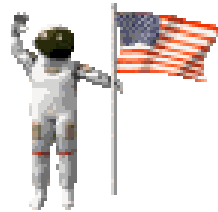
## Other Objects in the Solar System

Satellites are objects that revolve around planets (first 10 minutes)

*The moon is the earth's natural satellite.*



## A Walk On The Moon



[http://www.youtube.com/watch?v=Jg80HZsv\\_js&feature=related](http://www.youtube.com/watch?v=Jg80HZsv_js&feature=related)



The first human-made object to reach the surface of the Moon was the Soviet Union's Luna 2 mission on 13 September 1959.

The United States' Apollo 11 was the first manned mission to land on the Moon on 20 July 1969. There have been six manned landings (between 1969 and 1972) and numerous unmanned landings.

Twelve men have walked on the Moon and 18 more orbited the Moon without landing.

Men who walked on the Moon:

Neil Armstrong Apollo 11

Buzz Aldrin Apollo 11

Pete Conrad Apollo 12

Allen Bean Apollo 12

Alan Shepard Apollo 14

Edgar Mitchell Apollo 14

David Scott Apollo 15

James Irwin Apollo 15

John Young Apollo 16

Charles Duke Apollo 16

Eugene Cernan Apollo 17

Harrison Schmitt Apollo 17



Men Who Orbited the Moon Without Landing

1. Frank Borman - Apollo 8

2. Jim Lovell - Apollo 8, Apollo 13 (intended to land)

3. William Anders - Apollo 8

4. Tom Stafford - Apollo 10

5. John Young - Apollo 10 (later landed on Apollo 16)

6. Eugene Cernan - Apollo 10 (later landed on Apollo 17)

7. Michael Collins - Apollo 11

8. Dick Gordon - Apollo 12 (had been slated to land on Apollo 18)

9. Jack Swigert - Apollo 13

10. Fred Haise - Apollo 13 (intended to land; had been slated to land on Apollo 19)

11. Stuart Roosa - Apollo 14 (he also have been slated to land on the moon with Apollo 21 if missions beyond Apollo 20 had been planned)

12. Al Worden - Apollo 15

13. Ken Mattingly - Apollo 16

14. Ronald Evans - Apollo 17

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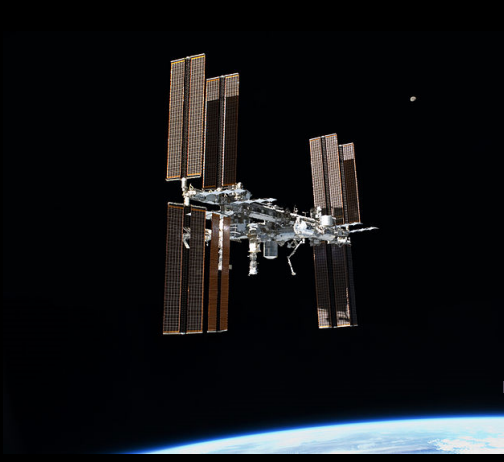
18. Ronald Evans - Apollo 17



The space shuttle was made to take astronauts and cargo to and from Earth orbit

**Jobs of the shuttle:**

- Carry Astronauts into space to work on the Hubble Space Telescope and the International Space Station
- Launched satellites
- It's a science laboratory while orbiting Earth



WHEN\_WE\_LEFT\_EARTH\_The\_NASA\_Missions\_A\_Home\_in\_Space  
(17:38-48:12)

# Space Stations

A **space station** is a spacecraft capable of supporting a crew which is designed to remain in space for an extended period of time, and to which other spacecraft can dock.

As of October 2011 two space stations are in orbit; the International Space Station, and China's Tiangong 1

<https://www.youtube.com/watch?v=OqTmSFkBqkg>

The Space Shuttle *Challenger* disaster occurred on January 28, 1986, when Space Shuttle *Challenger* broke apart 73 seconds into its flight, leading to the deaths of its seven crew members. The spacecraft disintegrated over the Atlantic Ocean, off the coast of central Florida



The **Space Shuttle *Columbia* disaster** occurred on February 1, 2003, when shortly before it was scheduled to conclude its 28<sup>th</sup> mission, the Space Shuttle *Columbia* disintegrated over Texas and Louisiana during re-entry into the Earth's atmosphere, resulting in the death of all seven crew members

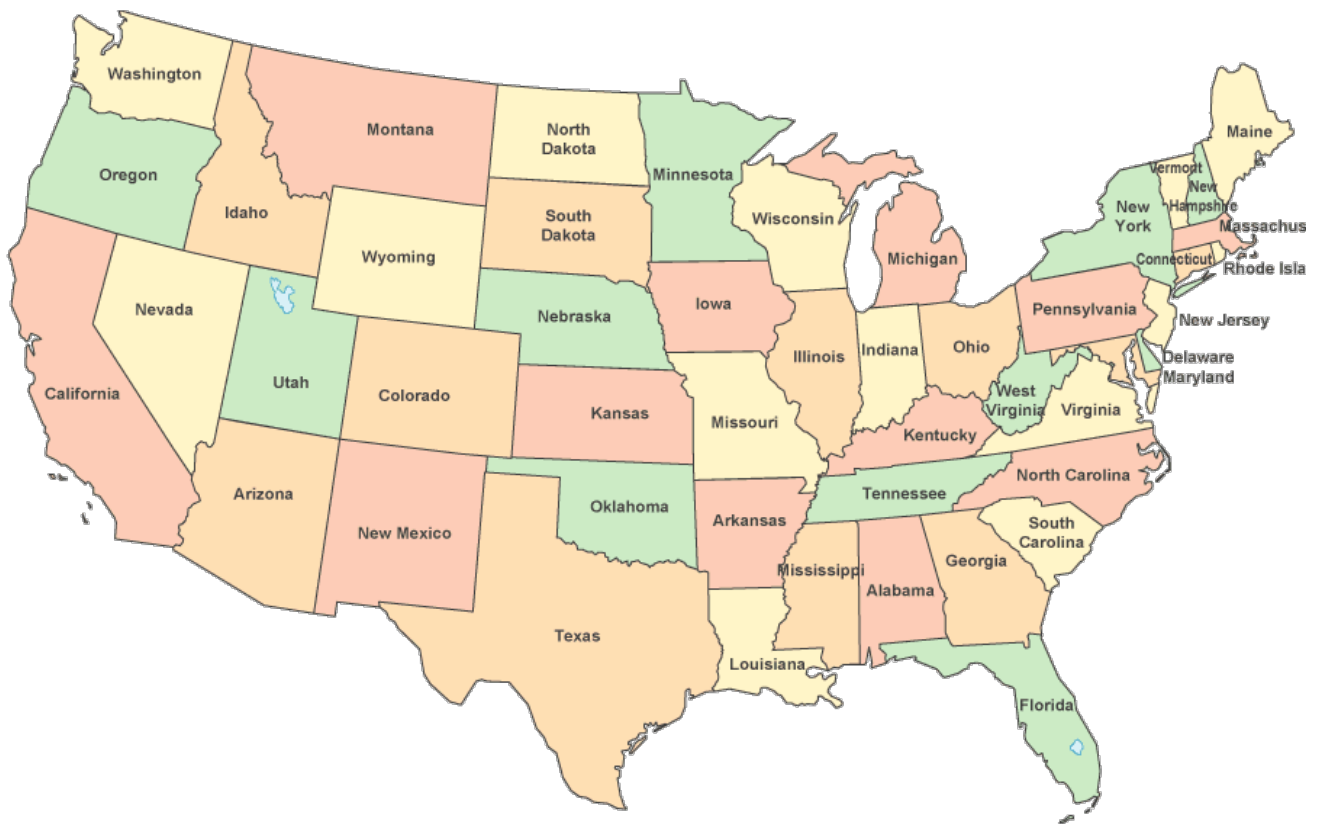


The loss of *Columbia* was a result of damage sustained during launch when a piece of foam insulation the size of a small briefcase broke off from the Space Shuttle external tank

<http://www.youtube.com/watch?v=h9R131h14zI>



Debris from Columbia were found in Texas, Arkansas and Louisiana







[FULL DOCUMENTARY PBS Columbia Space Shuttle Disaster](#)

<http://www.youtube.com/watch?v=6R4ctaCBapM>

<http://www.pbs.org/wgbh/nova/space/space-shuttle-disaster.html>